

WE CLAIM:

1. A surgical driver for use with an implant, the driver comprising:
  - a) an attachment piece having mounting structure configured to engage an implant;
  - b) a shaft connected to the attachment piece by a coupling arrangement, the coupling arrangement being configured to:
    - i) transfer torque from the shaft to the attachment piece; and
    - ii) permit the shaft to pivot relative to the attachment piece.
2. The surgical driver of claim 1, wherein the coupling arrangement is configured to permit the shaft to pivot in a range of axial orientations relative to a longitudinal axis of the attachment piece.
3. The surgical driver of claim 1, wherein the coupling arrangement permits the shaft to pivot to a plurality of axial orientations relative to an implant mounted on the attachment piece, the plurality of axial orientations being in a range of 1 to 30 degrees, in any direction, relative to a longitudinal axis of the implant.
4. The surgical driver of claim 1, wherein the coupling arrangement includes one or more facets formed at a distal end of the shaft that permit the shaft to pivot in a range of axial orientations relative to a longitudinal axis of the attachment piece.
5. The surgical driver of claim 4, wherein the one or more facets are formed on a knob located at the distal end of the shaft.
6. The surgical driver of claim 5, further including one or more facets located adjacent to a base of the knob.

7. The surgical driver of claim 1, wherein one of the shaft and the attachment piece includes indicia to indicate a rotational orientation of an implant mounted on the attachment piece.
8. The surgical driver of claim 1, wherein the coupling arrangement includes a recess formed in the attachment piece, the recess being configured to receive a distal end of the shaft.
9. The surgical driver of claim 8, wherein the attachment piece further includes a retaining member, and wherein at least a portion of the retaining member is positioned within the recess to detachably connect the shaft to the attachment piece.
10. The surgical driver of claim 9, further including a snap ring arranged to capture the retaining member within a bore formed in the attachment piece, the retaining member being moveable against the bias of the snap ring.
11. The surgical driver of claim 9, wherein the retaining member is spring-loaded by a snap ring that biases the retaining member to project into the recess to contact the distal end of the shaft.
12. The surgical driver of claim 11, wherein the retaining member is a ball.
13. The surgical driver of claim 12, wherein the ball engages an indent formed in the distal end of the shaft when the distal end of the shaft is inserted into the recess of the attachment piece.
14. The surgical driver of claim 13, wherein the indent formed in the distal end of the shaft is elliptical.

15. The surgical driver of claim 1, wherein the coupling arrangement includes a recess formed in the shaft, the recess being configured to receive a proximal end of the attachment piece.
16. The surgical driver of claim 1, further including a torque-limiting mechanism.
17. The surgical driver of claim 1, wherein the attachment piece includes self-centering structure that axially aligns the shaft with the attachment piece when the shaft is initially connected to the attachment piece.
18. The surgical driver of claim 1, further including a handle coupled to a proximal end of the shaft.
19. The surgical driver of claim 18, wherein the handle includes a ratchet mechanism.
20. The surgical driver of claim 1, wherein the mounting structure of the attachment piece includes a pin structure having arms that extend outward from a distal end of the attachment piece.
21. The surgical driver of claim 20, wherein the arms provide a snap-fit connection for mounting an implant.
22. The surgical driver of claim 20, wherein the arms provide a threaded connection for mounting an implant.
23. The surgical driver of claim 20, wherein the pin structure is positioned within a bore formed in a distal end of the attachment piece, the pin structure being removable from the bore.

24. A method of implanting a implant between two vertebral bodies, the method comprising:

a) rotationally driving the implant between the two vertebral bodies with a driver having a shaft, the shaft being configured to axially pivot relative to the implant to reduce the likelihood of side torque applied to the implant during implantation.

24. The method of claim 23, further including providing an attachment piece interconnected to a distal end of the shaft, and mounting the implant on the attachment piece.

25. The method of claim 24, further including pivoting the shaft of the surgical driver while applying torque without dislodging shaft from the attachment piece.

26. The method of claim 24, further including pivoting the shaft to provide a direct sight line to the attachment piece and the implant to view the attachment piece and the implant in a direction aligned with a longitudinal axis of the implant.

27. The method of claim 23, further including pivoting the shaft to one of a range of axial orientations, the range of axial orientations being in a range between 1 and 30 degrees, in any direction, relative to a longitudinal axis of the implant.

28. The method of claim 23, further including coupling an attachment piece to a distal end of the shaft, and mounting the implant on the distal end of the attachment piece.

29. A method of implanting a implant between two vertebral bodies, the method comprising:

a) mounting the implant to a surgical driver, the surgical driving including a connection that interconnects the implant to a shaft;

b) rotationally driving the implant between the two vertebral bodies in a first direction by applying torque to the shaft; and

b) axially pivoting the shaft relative to the implant when side torque is applied to the shaft to continue driving the implant in the first direction without re-direction caused by side torque.

30. The method of claim 29, further including the step of axially pivoting the shaft in one of a range of axial orientation, the range of axial orientation being between 1 and 30 degrees, in any direction, relative to a longitudinal axis of the implant.

31. A surgical system, comprising:

a) an implant;

b) an attachment piece having mounting structure, the implant being secured to the mounting structure of the attachment piece;

b) a shaft connected to the attachment piece by a coupling arrangement, the coupling arrangement being configured to:

i) transfer torque from the shaft to the implant; and

ii) permit the shaft to pivot relative to the implant.

32. The surgical system of claim 31, wherein the coupling arrangement permits the shaft to pivot to a plurality of axial orientations relative to the implant, the plurality of axial orientations being in a range of 1 to 30 degrees, in any direction, relative to the implant.

33. The surgical system of claim 32, wherein the coupling arrangement includes one or more facets formed at a distal end of the shaft that permit the shaft to pivot in the range of axial orientations.

34. The surgical system of claim 31, wherein the coupling arrangement includes a recess formed in the attachment piece, the recess being configured to receive a distal end of the shaft.

35. The surgical system of claim 34, wherein the attachment piece further includes a retaining member, and wherein at least a portion of the retaining member is positioned within the recess to detachably connect the shaft to the attachment piece.

36. The surgical system of claim 31, wherein the coupling arrangement includes a recess formed in the shaft, the recess being configured to receive a proximal end of the attachment piece.